FIG. 1

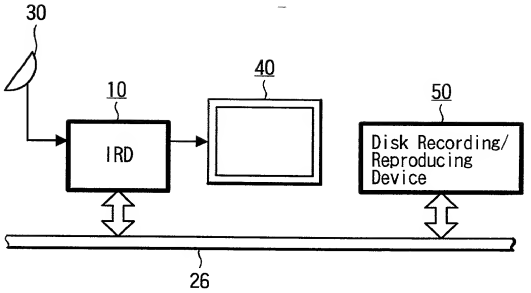


FIG. 2

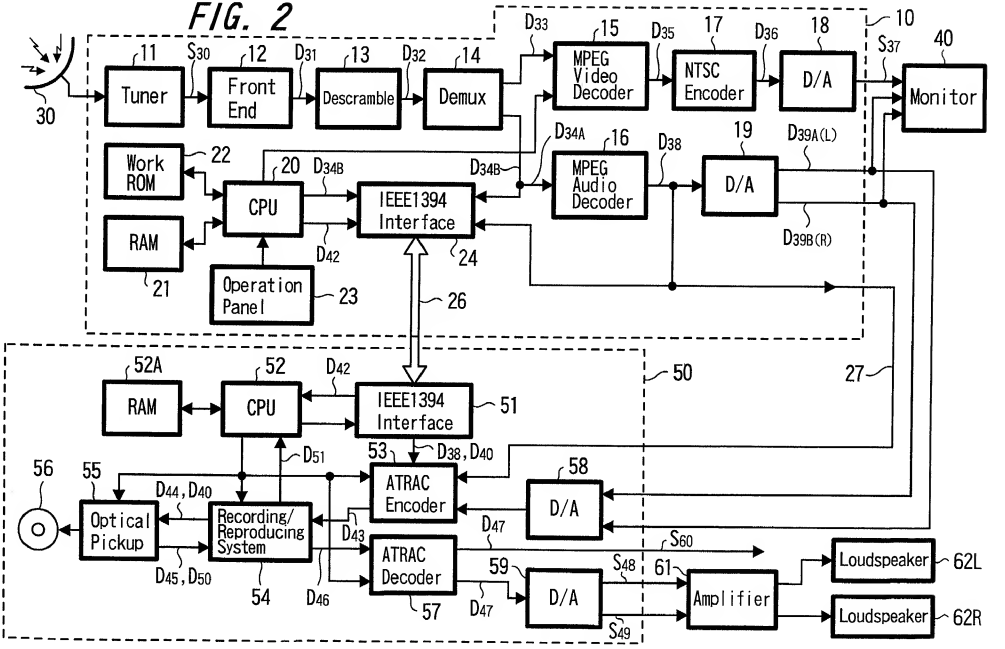


FIG. 3

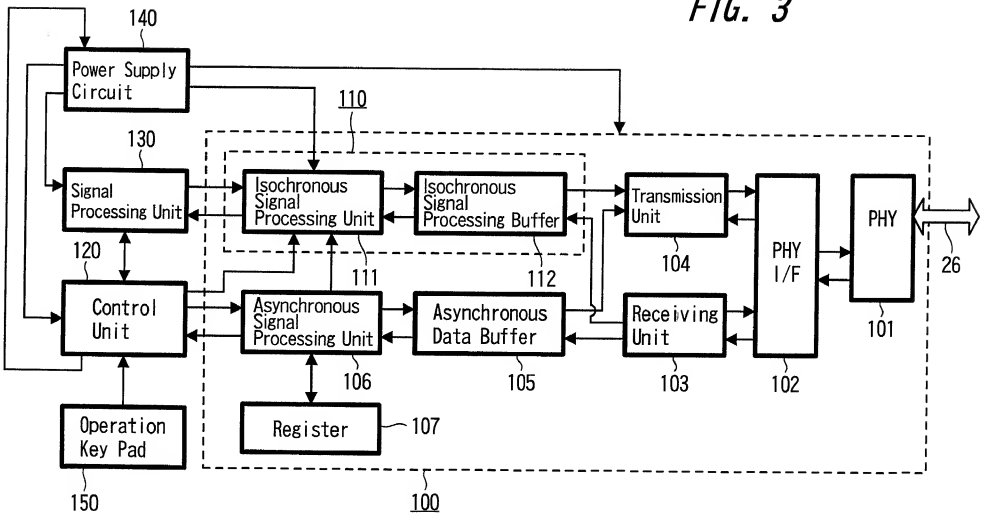
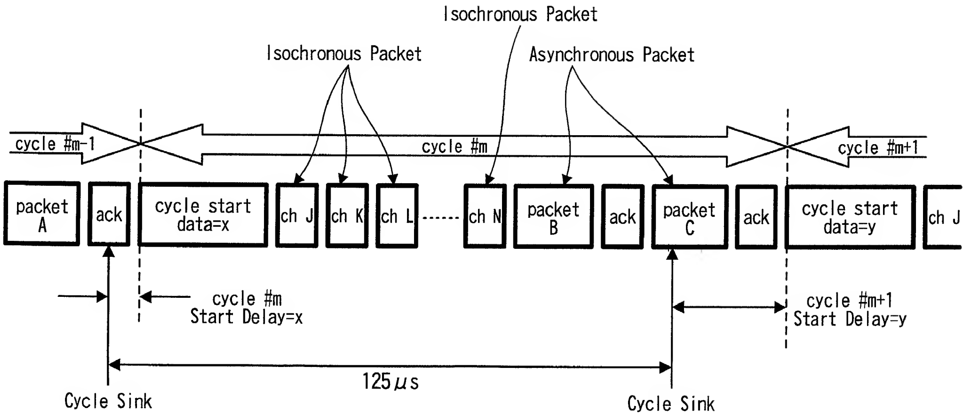


FIG. 4



Isochronous Packet
Isochronous Packet
Asynchronous Packet
cycle #m-1
cycle #m
cycle #m+1
packet A
ack
cycle start data=x
ch J
ch K
ch L
ch N
packet B
ack
packet C
ack
cycle start data=y
ch J
cycle #m Start Delay=x
cycle #m+1 Start Delay=y
125μs
Cycle Sink
Cycle Sink

FIG. 5

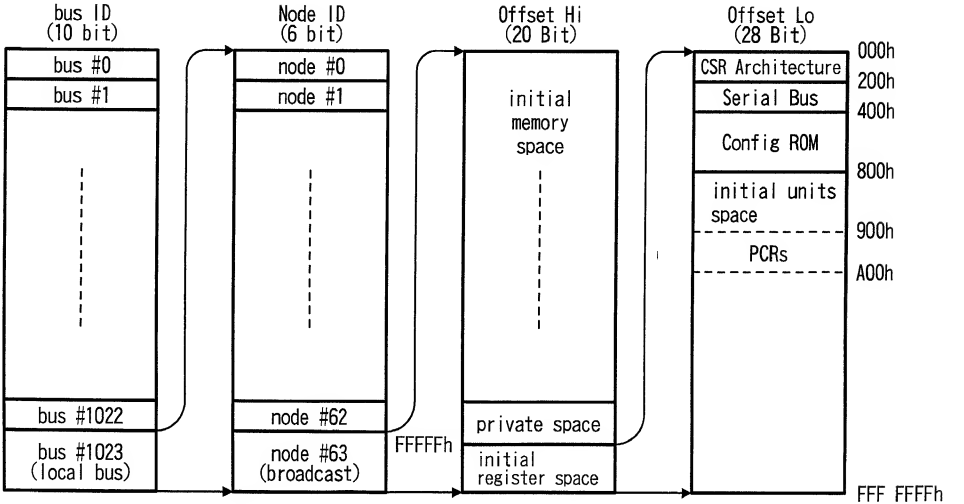


FIG. 6

Offset	Name	Operation
000h	State_Clear	State And Control Information
004h	State_Set	Set State_Clear Bit
008h	Node_IDs	Represent 16_Bit Node ID
00Ch	Reset_Start	Start Command Reset
018-01Ch	Split_Timeout	Regulate Maximum Time of Split
200h	Cycle_Time	Cycle Time
210h	Busy_Timeout	Regulate Limit of Retry
21Ch	Bus_Manager	Represent ID of Bus Manager
220h	Bandwidth_Available	Represent Band Which Can be Allocated to Isochronous Communication
224h-228h	Channels_Available	Represent Using States of Channels

FIG. 7

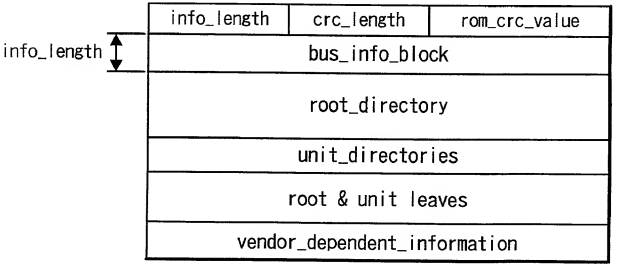


FIG. 8

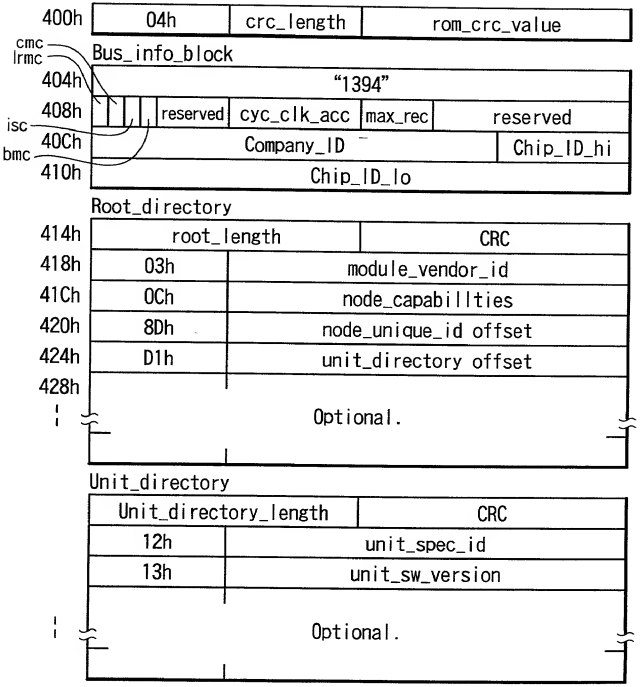

400h
04h
crc_length
rom_crc_value
cmc
lrmc
Bus_info_block
404h
"1394"
408h
reserved
cyc_clk_acc
max_rec
reserved
isc
40Ch
Company_ID
Chip_ID_hi
bmc
410h
Chip_ID_lo
Root_directory
414h
root_length
CRC
418h
03h
module_vendor_id
41Ch
0Ch
node_capabilities
420h
8Dh
node_unique_id offset
424h
D1h
unit_directory offset
428h
Optional.
Unit_directory
Unit_directory_length
CRC
12h
unit_spec_id
13h
unit_sw_version
Optional.

FIG. 9

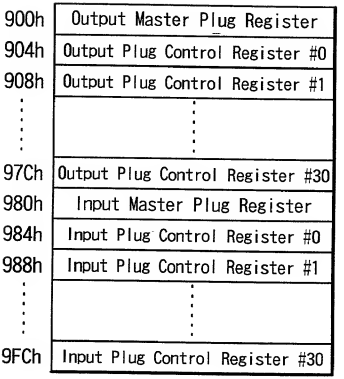

900h
Output Master Plug Register
904h
Output Plug Control Register #0
908h
Output Plug Control Register #1
97Ch
Output Plug Control Register #30
980h
Input Master Plug Register
984h
Input Plug Control Register #0
988h
Input Plug Control Register #1
9FCh
Input Plug Control Register #30

FIG. 10A

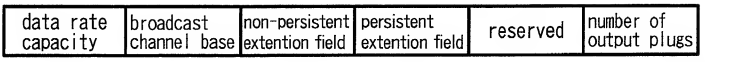


FIG. 10B

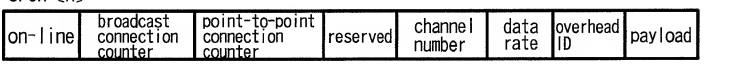


FIG. 10C

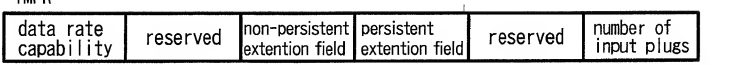


FIG. 10D

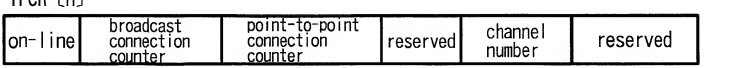
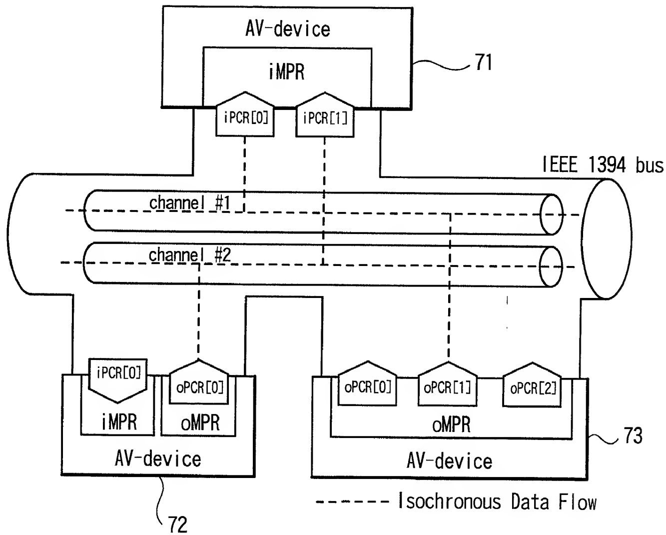


FIG. 11



AV-device
iMPR
iPCR[0]
iPCR[1]
71
IEEE 1394 bus
channel #1
channel #2
iPCR[0]
iMPR
oPCR[0]
oMPR
AV-device
72
oPCR[0]
oPCR[1]
oPCR[2]
oMPR
AV-device
73
Isochronous Data Flow

FIG. 12

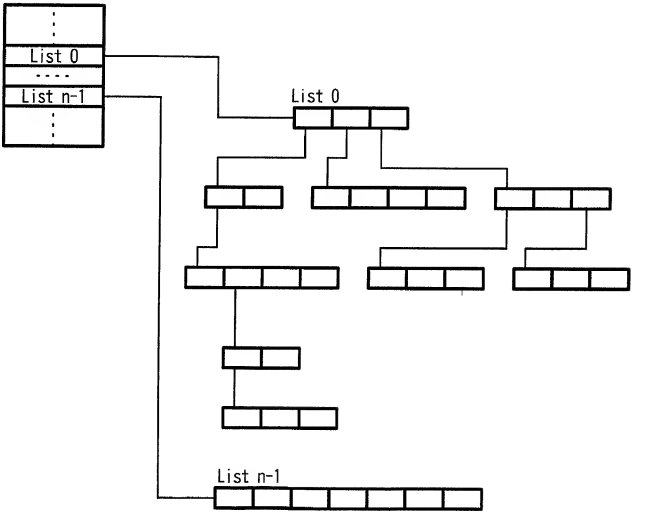


FIG. 13

The General Subunit Identifier Descriptor	
address	contents
00 00$_{16}$	descriptor_length
00 01$_{16}$	
00 02$_{16}$	generation_ID
00 03$_{16}$	size_of_list_ID
00 04$_{16}$	size_of_object_ID
00 05$_{16}$	size_of_object_position
00 06$_{16}$	number_of_root_object_lists(n)
00 07$_{16}$	
00 08$_{16}$	root_object_list_id_0
⋮	
⋮	⋮
⋮	root_object_list_id_n-1
⋮	
⋮	subunit_dependent_length
⋮	
⋮	subunit_dependent_information
⋮	
⋮	
⋮	manufacturer_dependent_length
⋮	
⋮	manufacturer_dependent_information
⋮	

FIG. 14

generation_ID values	
generation_ID	meaning
00_{16}	Data structures and command sets as specified in the AV/C General Specification, version 3.0
all others	reserved for future specification

FIG. 15

List ID Value Assignment Ranges	
range of values	list definition
0000_{16}-$0FFF_{16}$	reserved
1000_{16}-$3FFF_{16}$	subunit-type dependent
4000_{16}-$FFFF_{16}$	reserved
1 000_{16}-max list ID value	subunit-type dependent

FIG. 16

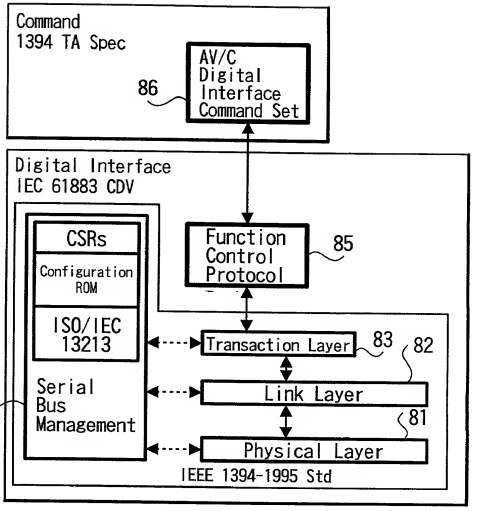

Command
1394 TA Spec
AV/C
Digital
Interface
Command Set
86
Digital Interface
IEC 61883 CDV
CSRs
Configuration
ROM
ISO/IEC
13213
Serial
Bus
Management
84
Function
Control
Protocol
85
Transaction Layer
83
82
Link Layer
81
Physical Layer
IEEE 1394-1995 Std

FIG. 17

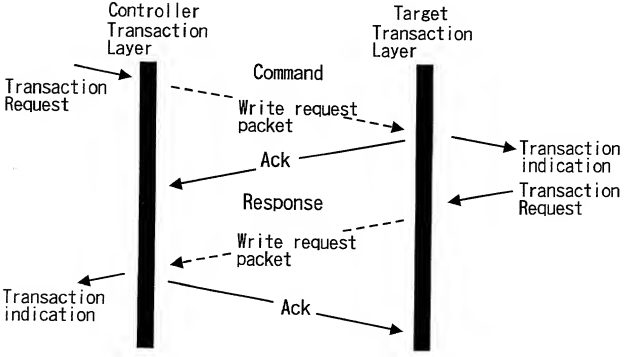

Controller
Transaction
Layer
Target
Transaction
Layer
Transaction
Request
Command
Write request
packet
Ack
Transaction
indication
Transaction
Request
Response
Write request
packet
Transaction
indication
Ack

FIG. 18

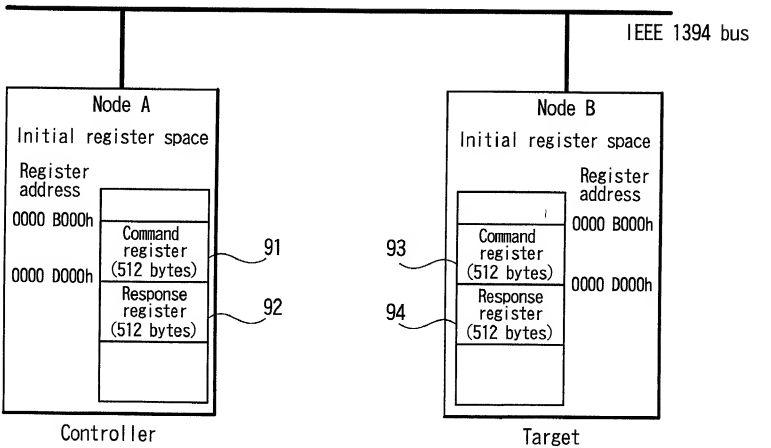
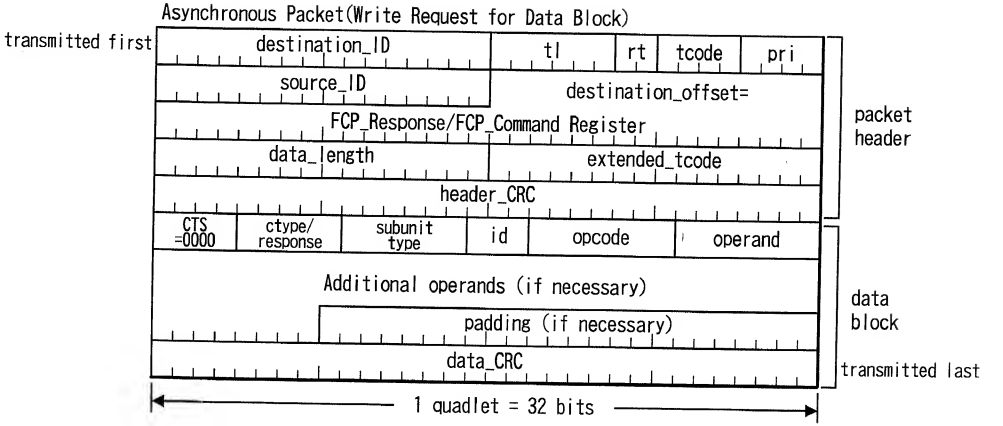


FIG. 19


Asynchronous Packet(Write Request for Data Block)
transmitted first
destination_ID
tl
rt
tcode
pri
source_ID
destination_offset=
FCP_Response/FCP_Command Register
data_length
extended_tcode
header_CRC
CTS =0000
ctype/ response
subunit type
id
opcode
operand
Additional operands (if necessary)
padding (if necessary)
data_CRC
packet header
data block
transmitted last
1 quadlet = 32 bits

ctype/response

Command	0000	Control
	0001	Status
	0010	Specific Inquiry
	0011	Notify
	0100	General Inquiry
	0101 ~ 0111	(reserved for future specification)
Response	1000	Not Implemented
	1001	Accepted
	1010	Rejected
	1011	In Transition
	1100	Implemented/Stable
	1101	Changed
	1110	(reserved for future specification)
	1111	Interim

FIG. 20A

subunit_type

00000	Video Monitor
~	(reserved)
00011	Disc recorder/Player
00100	Tape recorder/Player
00101	Tuner
00111	Video Camera
~	(reserved)
11100	Vendor unique
11101	reserved
11110	Subunit type extended to next byte
11111	Unit

FIG. 20B

opcode:Operation Code

00h	Vendor-Dependent
50h	Search Mode
51h	Time Code
52h	ATN
60h	Open MIC
61h	Read MIC
62h	Write MIC
C1h	Load Medium
C2h	Record
C3h	Play
C4h	Wind
~	~

FIG. 20C

FIG. 21A

AV/C	control	tape recorder /player	Case of Tape Recorder ID0	Play	Forward
CTS= 0000	ctype= 0000	subunit type= 00100	id= 000	opcode= C3h	operand= 75h

FIG. 21B

AV/C	accepted	tape recorder /player	Case of Tape Recorder ID0	Play	Forward
CTS= 0000	response =1001	subunit type= 00100	id= 000	opcode= C3h	operand= 75h

FIG. 22

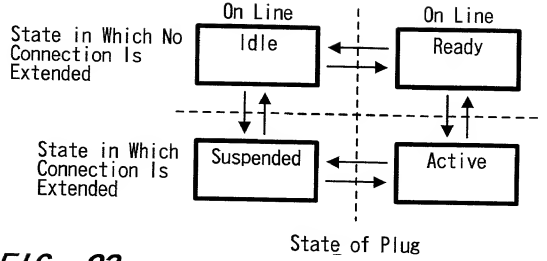

On Line
On Line
State in Which No Connection Is Extended
Idle
Ready
State in Which Connection Is Extended
Suspended
Active
State of Plug

FIG. 23

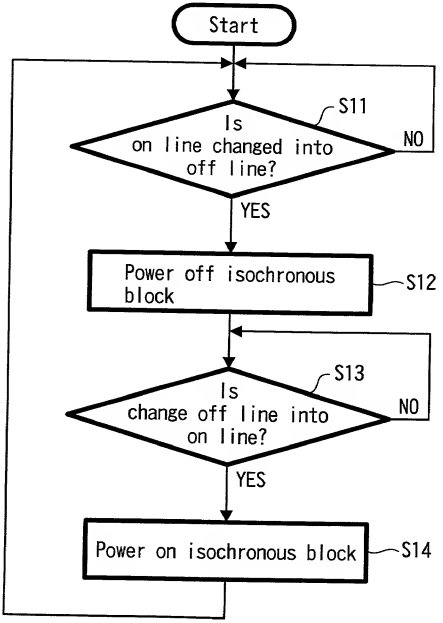
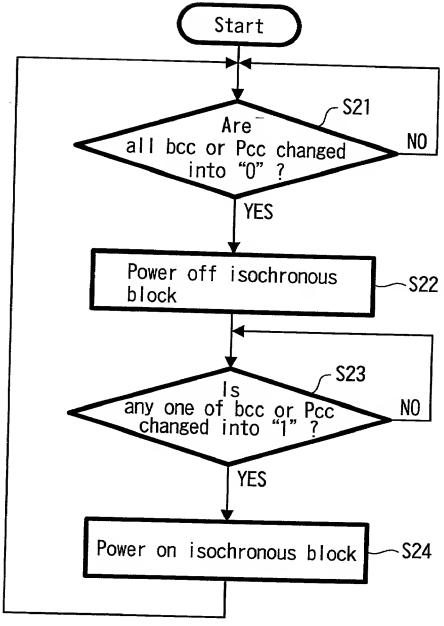

Start
S11
Is on line changed into off line?
NO
YES
Power off isochronous block
S12
S13
Is change off line into on line?
NO
YES
Power on isochronous block
S14

FIG. 24


Start
S21
Are all bcc or Pcc changed into "0" ?
NO
YES
Power off isochronous block
S22
S23
Is any one of bcc or Pcc changed into "1" ?
NO
YES
Power on isochronous block
S24